Air Quality
PERMIT TO CONSTRUCT
State of Idaho
Department of Environmental Quality

PERMIT No.: P-2009.0002
FACILITY ID No.: 029-00003
AQCR: 61 **CLASS:** A **ZONE:** 12
SIC: 2874 **NAICS:** 325312
UTM COORDINATE (km): 455.8, 4731.8

1. **PERMITTEE**
Nu-West Industries, Inc.; Agrium Conda Phosphate Operations

2. **PROJECT**
Phosphogypsum Stacks, revision for construction of the West Gypsum Stack II (F-GYP-2)

3. MAILING ADDRESS	CITY	STATE	ZIP
3010 Conda Road	Soda Springs	ID	83276
4. FACILITY CONTACT	**TITLE**	**TELEPHONE**	
Coleman Kavanagh	Environmental Supervisor	(208) 547-4381 ext 263	
5. RESPONSIBLE OFFICIAL	**TITLE**	**TELEPHONE**	
Erik Vettergren	Plant Manager	(208) 547-4381	
6. EXACT PLANT LOCATION		**COUNTY**	
7 miles north of Soda Springs, 1.2 miles east of Highway 34		Caribou	

7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**
Phosphate-based fertilizer products

8. **PERMIT AUTHORITY**

This permit is issued according to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.200 through 228, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented with its application. Changes in design, equipment or operations may be considered a modification. Modifications are subject to DEQ review in accordance with IDAPA 58.01.01.200 through 228 of the Rules for the Control of Air Pollution in Idaho.

KEN HANNA, PERMIT WRITER
DEPARTMENT OF ENVIRONMENTAL QUALITY

MIKE SIMON, STATIONARY SOURCE PROGRAM MANAGER
DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE MODIFIED/REVISED:	February 20, 2009
DATE ISSUED:	July 22, 2005

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Acronyms, Units, and Chemical Nomenclature

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CAA	Clean Air Act
CFR	Code of Federal Regulations
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
gyp	gypsum or phosphogypsum
HAP	hazardous air pollutant
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pounds per hour
m	meter(s)
MACT	Maximum Achievable Control Technology
NAICS	North American Industry Classification System
NESHAP	Nation Emission Standards for Hazardous Air Pollutants
NSPS	New Source Performance Standards
pCi	picocurie
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PTC	permit to construct
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
TAP	toxic air pollutant
T/yr	tons per year
UTM	Universal Transverse Mercator

1. PERMIT TO CONSTRUCT SCOPE

Purpose

1.1 The purpose of this PTC revision is to revise the requirements for construction of the West Gypsum Stack II (F-GYP-2). This revised permit clarifies the pond surface size requirements, emissions limits, and the monitoring requirements for the facility's phosphogypsum (gyp) stacks.

1.2 Those permit conditions that have been modified or revised by this permitting action are identified by a date citation located directly under the permit condition and on the right hand margin.

1.3 This PTC replaces PTC No. P-2007.0170, issued on December 19, 2007, for construction of the West Gypsum Stack II (F-GYP-2), the terms and conditions of which shall no longer apply.

Regulated Sources

1.4 Table 1.1 lists all sources of regulated emissions in this PTC.

Table 1.1 SUMMARY OF REGULATED SOURCES

Permit Section	Source Description	Emissions Control
2	125-acre Gyp Stack, F-GYP-0, built prior to 1967 The gyp stack is a phosphogypsum settling pond	Reasonable control of fugitive emissions
2	125-acre West Gyp Stack I, F-GYP-1 The gyp stack is a phosphogypsum settling pond	Reasonable control of fugitive emissions
2	125-acre West Gyp Stack II, F-GYP-2 The gyp stack is a phosphogypsum settling pond	Reasonable control of fugitive emissions

2. GYP STACKS

2.1 Process Description

Phosphogypsum, a by-product of the phosphoric acid production process, is slurried to a pile referred to as a "gyp stack." The slurry is approximately 20% solids. At the gyp stack, solids in the slurry are allowed to settle and the water is decanted to an evaporative cooling pond. The process water is recycled to the processing plant.

The settled phosphogypsum is allowed to dry to a moisture content of about 40% by directing the slurry to a rotation of cells on the stack. When a cell has dried appropriately, the cell is excavated using a backhoe to build up the exterior dikes of the stack. When the interior of the cell is excavated and dikes are elevated to the necessary height, the cell is flooded with slurry again.

2.2 Emissions Control Description

Table 2.1 DESCRIPTION FOR WEST GYP STACKS

Emissions Units / Processes	Emissions Control Device	Emissions Point
125-acre Gyp Stack, F-GYP-0	Reasonable control of fugitive emissions	Fugitive from gyp stack
125-acre West Gyp Stack I, F-GYP-1	Reasonable control of fugitive emissions	Fugitive from gyp stack
125-acre West Gyp Stack II, F-GYP-2	Reasonable control of fugitive emissions	Fugitive from gyp stack

Emissions Limits

2.3 Gyp Stack Emissions Limits

2.3.1 Upon completion of construction of F-GYP-2, the combined emissions of fluoride (F) from the three 125-acre gypsum stacks (F-GYP-0, F-GYP-1, and F-GYP-2) shall not exceed 200 pounds per day and 14.6 tons per any consecutive rolling 12-month period.

2.3.2 Prior to completion of construction of F-GYP-2, the combined emissions of fluoride (F) from the two 125-acre gypsum stacks (F-GYP-0 and F-GYP-1) shall not exceed 200 pounds per day and 36.5 tons per any consecutive rolling 12-month period. After construction of F-GYP-2 is completed, Permit Condition 2.3.2 no longer applies.

2.3.3 For purposes of compliance with Permit Conditions 2.3, 2.7, and 2.10, construction of the new gypsum stack (F-GYP-2) shall include placement of at least two feet of compacted phosphogypsum atop the 60 mil HDPE composite liner membrane and compacted clay to ensure adequate liner integrity. At that point, process water will be introduced and when fully displaced by gypsum slurry in both cells, the construction process shall be deemed complete.

[02/20/09]

2.4 **Phosphoric Acid Plant Emissions Limit**

The fluoride emissions from the phosphoric acid plant shall not exceed 3.8 tons per any consecutive 12-month period.

[12/19/07]

2.5 **Reasonable Control of Fugitive Dust**

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

2.6 **Radon Emissions from Phosphogypsum Stacks**

Each person who generates phosphogypsum shall place all phosphogypsum in stacks. Phosphogypsum may be removed from a phosphogypsum stack only as expressly provided by 40 CFR 61, Subpart R, National Emission Standards for Radon Emissions from Phosphogypsum Stacks. If the gypsum stack becomes classified as inactive, the stack is then subject to the radon-222 emissions limits (1.9 pCi/(ft^2-sec)) and related requirements in 40 CFR 61 Subpart R. *Inactive stack* means a stack to which no further routine additions of phosphogypsum will be made and which is no longer used for water management associated with the production of phosphogypsum. If a stack has not been used for either purpose for two years, it is presumed to be inactive.

Operating Requirements

2.7 **Gyp Stack Area Limits**

2.7.1 Upon completion of construction of F-GYP-2, the combined visible liquid layer surface area of the ponds within the three 125-acre gyp stacks (F-GYP-0, F-GYP-1, and F-GYP-2) shall not exceed 50 acres on a 12-month rolling average basis.

2.7.2 Prior to completion of construction of F-GYP-2, the combined visible liquid layer surface area of the ponds within the two 125-acre gyp stacks (F-GYP-0 and F-GYP-1) shall not exceed 125 acres. After construction of F-GYP-2 is completed, Permit Condition 2.7.2 no longer applies.

[02/20/09]

2.8 **Distribution and Use of Phosphogypsum**

Phosphogypsum may be lawfully removed from a stack and distributed for use in outdoor agricultural research and development, agricultural field use, indoor research and development activities, or for other purposes, only in accordance with the requirements of 40 CFR 61 Subpart R.

2.9 **Phosphoric Acid Plant P_2O_5 Throughput Limit**

The equivalent P_2O_5 feed to the phosphoric acid plant shall not exceed 560,000 tons per any consecutive 12-month period.

Monitoring and Recordkeeping Requirements

2.10 Gyp Stack Area Monitoring

2.10.1 Upon completion of construction of F-GYP-2, on a twice-monthly basis (the first and third full calendar week of each month), Nu-West shall measure and record, in acres, the combined visible liquid layer surface area of each of the ponds within the three 125-acre gyp stacks. Monitoring and recordkeeping procedures for performing this measurement shall be included in a Water Management and Monitoring Plan. For purposes of demonstrating compliance using the approved Water Management and Monitoring Plan, the term "visible liquid layer area," as used in Permit Condition 2.7, shall mean that observable surface area that is covered with a visible layer of liquid (standing or flowing) within the Gyp Stack system ponds. The Water Management and Monitoring Plan is incorporated by reference into this permit and shall be maintained on-site and made available to DEQ representatives upon request.

Compliance with the 50-acre limit in Permit Condition 2.7 shall be based on a rolling 12-month average of the twice-monthly observations.

Compliance with the daily emission limit in Permit Condition 2.3 shall be demonstrated based on each of the individual observations. Monitoring records that are generated to demonstrate compliance with the daily limit shall also be maintained in accordance with General Provision 7.

2.10.2 Prior to completion of construction of F-GYP-2, once per year the permittee shall measure and record, in acres, the combined visible liquid layer surface area of each of the ponds within the two 125-acre gyp stacks (F-GYP-0 and F-GYP-1). After construction of F-GYP-2 is completed, Permit Condition 2.10.2 no longer applies.

2.10.3 Within 60 days of issuance of the permit, the permittee shall submit a copy of the Water Management and Monitoring Plan (Plan) to DEQ at the address listed in Table 2.2 of this permit. If the Plan is changed, a copy of the revised Plan shall be sent to DEQ.

[02/20/09]

2.11 NSR Projected Emissions Records for the Gypsum Stack Project; 52.21(r)(6)

The permittee shall maintain records and provide reports as follows for the project to construct a new gypsum stack in accordance with IDAPA 58.01.01.205.01 [40 CFR 52.21(r)(6) and (7)]:

2.11.1 In accordance with 40 CFR 52.21(r)(6)(i), before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:

(a) A description of the project;

(b) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project (i.e., gypsum stacks); and

(c) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under 40 CFR 52.21(b)(41)(ii)(c) and an explanation for why such amount was excluded, and any netting calculations, if applicable.

2.11.2 In accordance with 40 CFR 52.21(r)(6)(iii), the owner or operator shall monitor the emissions of fluoride from the emissions units listed in Permit Condition 2.11.1; and calculate and maintain a record of the

annual emissions, in tons per year on a calendar year basis, for a period of 10 years following resumption of regular operations after the change.

2.11.3 In accordance with 40 CFR 52.21(r)(6)(v), the owner or operator shall submit a report to DEQ and the EPA Administrator if the annual emissions, in tons per year, from the project identified under Permit Condition 2.11.1, exceed the baseline actual emissions (as documented and maintained pursuant to Permit Condition 2.11.1(c)), by a significant amount (as defined in 40 CFR 52.21(b)(23)) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to Permit Condition 2.11.1(c). Such report shall be submitted to DEQ and the EPA Administrator within 60 days after the end of such year. The report shall contain the following:

(a) The name, address and telephone number of the major stationary source;

(b) The annual emissions as calculated pursuant to 40 CFR 52.21(r)(6)(iii); and

(c) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

2.11.4 In accordance with 40 CFR 52.21(r)(7), the owner or operator of the source shall make the information required to be documented and maintained pursuant to 40 CFR 52.21(r)(6) available for review upon a request for inspection by the Administrator or the general public pursuant to the requirements contained in 40 CFR 70.4(b)(3)(viii).

2.11.5 Written procedures to demonstrate compliance with Permit Condition 2.11 shall be included in the Water Management and Monitoring Plan, including the required records maintenance activities.

[02/20/09]

2.12 Radon Monitoring and Compliance Procedures

Within 60 days following the date on which a stack becomes an inactive stack, each owner or operator of an inactive phosphogypsum stack shall test the stack for radon-222 flux in accordance with the procedures described in 40 CFR part 61, Appendix B, Method 115. DEQ and EPA shall be notified at least 30 days prior to each such emissions test so that DEQ or the EPA may, at its option, observe the test. The test report shall be submitted according to the requirements in 40 CFR 61.203.

2.13 Phosphoric Acid Plant Feed

Each month, the permittee shall monitor and record the equivalent P_2O_5 feed to the phosphoric acid plant for the previous month and for the previous consecutive 12-month period. Monitoring of P_2O_5 feed shall be conducted in accordance with 40 CFR 63.605.

[12/19/07]

NESHAP 40 CFR 61 Subpart A – General Provisions

2.14 Generally applicable reporting, record keeping, and notification requirements of Subpart A of the National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR 61) are included in Table 2.2. These summaries are provided to highlight the notification and record keeping requirements of 40 CFR 61 for affected facilities, and are not intended to be a comprehensive listing of all general provision requirements that may apply nor do the summaries relieve the permittee from the responsibility to comply with all applicable requirements of the CFR. Should there be a conflict between these

summaries and the NESHAP, the NESHAP shall govern. The permittee is encouraged to read all of 40 CFR 61 Subpart A. The CFRs are available online at: http://www.gpoaccess.gov/cfr/index.html .

Table 2.2 NESHAP SUBPART A (40 CFR 61) SUMMARY OF GENERAL PROVISIONS FOR AFFECTED FACILITIES

Section	Section Title	Summary of Section
61.04	Address	All requests, reports, applications, and other communications shall be submitted to: Director Air and Waste Office EPA Region 10 Operating Permits, OAQ-107 1200 Sixth Avenue Seattle, WA 98101 Air Quality Permit Compliance Department of Environmental Quality Air Pocatello Regional Office 444 Hospital Way, #300 Pocatello, ID 83201
61.05	Prohibited Activities	No owner or operator shall construct or modify any stationary source subject to a standard without first obtaining written approval in accordance with 40 CFR 61.08
61.07	Application for approval of construction/ modification	Submit application for approval of construction of any new source or modification of an existing source before the construction or modification is planned to commence.
61.09	Notification of startup	Notification of anticipated date of initial startup of the source not more than 60 days nor less than 30 days before that date; and notification of the actual date of initial startup of the source within 15 days after that date.
61.10	Source reporting	All facilities designated under Subpart R are exempt from the reporting requirements of 40 CFR 61.10 in accordance with 40 CFR 61.210.
61.12(c) and (e)	Compliance with standards and maintenance requirements	The owner or operator of each stationary source shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.
61.13	Emission tests	When emission testing is required under Subpart R, the requirements under 40 CFR 61.13 shall be complied with also.
61.14	Monitoring Requirements	For any monitoring required under Subpart R, the requirements under 40 CFR 61.14 shall be complied with also
61.19	Circumvention	No owner or operator shall build, erect, install or use any article or method, including dilution, to conceal an emission which would otherwise constitute a violation.

[02/20/09]

3. PERMIT TO CONSTRUCT GENERAL PROVISIONS

General Compliance

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the Rules for the Control of Air Pollution in Idaho. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the Rules for the Control of Air Pollution in Idaho, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq.

[Idaho Code §39-101, et seq.]

2. The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/94]

3. Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

Inspection and Entry

4. Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:
   a. Enter upon the permittee's premises where an emissions source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
   b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
   d. As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

Construction and Operation Notification

5. The permittee shall furnish DEQ written notifications as follows in accordance with IDAPA 58.01.01.211:
   a. A notification of the date of initiation of construction, within five working days after occurrence;
   b. A notification of the date of any suspension of construction, if such suspension lasts for one year or more;

c. A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date;

d. A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date; and

e. A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211, 5/1/94]

Performance Testing

6. If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

   All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

   Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

   [IDAPA 58.01.01.157, 4/5/00]

Monitoring and Recordkeeping

7. The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Records of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

   [IDAPA 58.01.01.211, 5/1/94]

Excess Emissions

8. The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

[IDAPA 58.01.01.130-136, 4/5/00]

Certification

9. All documents submitted to DEQ, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

False Statements

10. No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

Tampering

11. No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Transferability

12. This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

Severability

13. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]

Agrium

NU-WEST CPO GYPSUM STACK COMMISSIONING AND INSPECTION PLAN

1. BACKGROUND INFORMATION

1.1 Introduction

The gypsum storage system at Nu-West Conda Phosphate Operations (CPO) consists of the Phase I and Phase II stacks, and the old gypsum stack system, including the following processes and types of storage structures.

1.2 Phase I and II Gypsum Stack Operation

CPO will be operating the Phase I part of the gypsum stack system as of January 2006 and Phase II starting in 2010. These new cells will be used to store gypsum (phosphogypsum) slurry that is pumped from the fertilizer plant, located southeast of the existing stack system. The Phase I and II cells will be approximately 2400 feet on each side and each will have a starting interior area of approximately 125 acres.

As a part of the construction of the new stack, the new cells are underlain by a composite liner consisting of compacted gypsum, a 60 mil HDPE (high density polyethylene) membrane and compacted clay, to provide groundwater protection. The cells are also constructed with 2 internal underdrains, just above the HDPE liner, to help lower the phreatic line (water level) in perimeter areas of the stack. These drains will flow to the perimeter ditch around the stack. Gypsum will be pumped via a 16 inch HDPE pipe line, as a slurry, from the plant at a nominal rate of 3500 to 4000 gallons per minute (gpm) and a solids content of 20 to 30%.

The new stacks will be raised using upstream "rim ditch" construction methods. The gypsum will be discharged into the cell and allowed to settle. The discharge point will be moved as the gypsum builds up at the end of the discharge pipe. Once the gypsum has settled and dewatered, it will be excavated from the edge of the stack by a hydraulic backhoe and placed on the perimeter of the stack. The excavated gypsum will then be spread and compacted to form and raise the outside slope of the stack. Each cell will be operated as an individual cell, but after the completion of construction of the new stack the entire stack system will be allowed to have no more than 50 acres of a visible liquid layer on a rolling 12-month basis as detailed in the CPO Gypsum Stack Water Management and Monitoring Plan.

The slopes of the stack will be built at an angle of 2H to 1 V with two intermediate horizontal benches. The mid-height bench will be fitted with a perimeter slope drain to help lower the phreatic surface in the stack. The stack will have a final slope angle of 2.3H to 1V and is anticipated to have a total height of approximately 175 feet (top elevation of about 6330 feet). The acidic process water that is temporarily stored on top

of the stack will be returned to the existing cooling ponds, 1 mile to the south, via an HDPE lined return water ditch that is located at the base of the existing stack system.

1.3 Old Gypsum Stacks

The old gypsum stack system consists of #1 gyp, #2/3 gyp and #3 tailings pond. The old gyp stacks will be used for part of the year through 2009 and then will be used for emergency gypsum storage and water management. Adequate storage space will be provided for approximately 600 acre-feet of storage. The gypsum slurry can be routed to the old stacks through the new East gyp transport line using either the East or West gyp pump at the same nominal rate and solid content.

When operating into the old gypsum stack, conventional construction techniques are used to raise the dikes. This method employs the use of earth-moving equipment such as scrapers, bulldozers, blades, compactors and hydraulic excavators. The gypsum is excavated from a borrow site and allowed proper time to dry. Once dried, the gypsum is hauled via the equipment and placed on the crest of the existing gypsum dike, which has been properly scarified and prepared. The gypsum is then spread, shaped, and compacted across the dike forming the new lift. Each lift will range from 12-18 inches when using the conventional construction method.

The decant procedures used when operating into the old stack consist of either the decant pipe method or the open trench method. With the decant pipe method, a cut is made in the existing gypsum dike and an HDPE pipe is placed in the bottom. The cut is then backfilled and the gypsum is allowed time to "set-up" before activating the decant pipe. Once the new pipe is activated, it is inspected regularly to ensure that no leakage exists. With the open cut method, a cut is made in the gypsum dike and the water is allowed to flow through the trench and over the gypsum dike in a controlled manner. For both methods, the decanted water then flows into the decant ditch located at the base of the stack on the west side. The water then flows to the cooling ponds where it is mixed with hot process water and allowed to cool before being pumped back to the plant.

2. COMMISSIONING PLAN FOR PHASE II STACK

2.1 General Construction Methodology

The Phase II gypsum stack will be commissioned after the completion of construction, projected to occur in mid 2010. The new stack will be underlain by a composite liner consisting of at least two feet of compacted gypsum, a 60 mil HDPE membrane, and compacted clay. Liner construction begins with placement of the compacted clay and HDPE, followed by construction of dikes around the perimeter and across the center of the new stack and two feet of compacted gypsum mechanically placed above the HDPE liner.

The new cell will include a center dike to effectively split the 125 acre cell into two equal ponds for purposes of facilitating the final phase of liner construction. The first cell will be filled with process water to an elevation that will allow water to be decanted from the cell to the cooling pond through the decant ditch system. The filling process then will switch to gypsum slurry and the water will gradually be displaced with gypsum. Once this first cell is filled with gypsum and the water displaced, the second cell will be filled with water and the process repeated until the entire 125 acre cell has received a sufficient quantity of compacted gypsum as the final layer of the composite liner. This liner construction process is described below in greater detail.

2.2 Initial Water Fill

After completion of compacted clay and HDPE layer placement and initial dike construction, one of the cells will be filled with water from the process and production wells to an elevation that will allow decanting through a pipe buried in the dikes. Process water will be transported to the Phase II cell through the spare gypsum HDPE pipe line.

2.3 Gypsum Slurry to Phase II

Once the first cell is filled with adequate water that a decant can be started, the gypsum slurry will be switched to this cell and the water will begin to be displaced to the decant ditch and cooling pond. The plant will continue to operate the existing gyp stack system (i.e., old stack and Phase I cells) with a limit of 125 acres while the new stack is under construction. Because the plant is likely to be operating in the Phase I stacks during Phase II construction, the visible liquid layer area in the overall gyp stack system should be 125 acres or less in the Phase I stack and up to 125 acres in Phase II. Once the gypsum slurry is switched to the first half of Phase II and Phase I is drained, the overall acreage will immediately begin to be reduced until the first cell has the water displaced.

As the visible liquid layer area of the Phase II stack's first liner construction cell is being reduced after sufficient gypsum placement on the HDPE membrane, the second Phase II stack liner construction cell will begin filling with water. When process water is fully displaced from the first cell, the slurry pipe line will be switched to the second cell to begin placement of the final gypsum layer on the HDPE membrane of the other half of the Phase II stack. During the process of constructing the Phase II stack liner's compacted gypsum layer, the water and slurry will be managed such that the visible liquid layer on the Phase II stack should not significantly exceed 112.5 acres during the construction period.

2.4 Phase II Stack Commissioning Duration

The Phase II stack commissioning will occur after completion of stack liner construction, which is defined as placement of a minimum of two feet of compacted gypsum atop the liner's HDPE membrane and related dewatering. As one of the last components of the construction of the Phase II stack, the new stack will be dewatered to a point where no more than 50 acres of the stack is covered with a visible liquid layer on a 12-month rolling average basis. Utilizing a center dike to facilitate water/slurry management during liner construction, it is estimated that Phase II stack liner construction should be accomplished within approximately 6 months after placement of the HDPE membrane and initial dike construction.

Agrium

3. INSPECTION REQUIREMENTS

3.1 General

To ensure safe and proper operation of the combined gypsum stack system, the system shall be inspected for integrity and water management as described in this Section 3 (Inspection Requirements).

3.2 Training

All personnel must receive training prior to engaging in gypsum stack system inspection or operation activities. All inspectors shall undergo annual training in accordance with the Agrium CPO training program. Records documenting training of inspectors and operators shall be maintained for a period of 3 years.

3.3 Inspection Frequency and Inspectors

Employees of Agrium CPO who have received annual training by an engineer experienced in dike design, construction, operation, and inspection will perform inspections. Inspection records will be kept on file for a minimum of 3 years. The inspector will use the designated Gyp truck to traverse the terrain involved at a slow speed, and on foot as needed. The findings of each inspection will be recorded, signed by the inspector, and filed after supervisory personnel initiate any necessary corrective action. The inspection program includes the following type of inspections and inspectors:

- Daily Inspections will be performed by the field operator 2 to 3 times per shift and will include inspection of the pond system, condition of dikes, water level elevations and freeboard, and existing critical conditions, if any, until corrective maintenance is completed.
- Weekly Inspections will be performed by the Ponds Supervisor and/or his designee and will include inspection of perimeter earthen dike conditions, water level control structures (e.g. spillways, pumps, and pipe lines), and potential trouble areas.
- Annual Inspections to be performed by a Third Party Engineer.
- Excavation & Backfilling Inspections of Decant Cuts to be performed, as applicable, by qualified company employee.

Agrium Conda Phosphate Operations*
3010 Conda Road
Soda Springs, ID 83276
Tel: 208-547-4381

Agrium

August 27, 2009

U.S. Environmental Protection Agency
Region 10 (Federal & Delegated Air Programs Unit)
Office of Air, Waste, and Toxics (AWT-107)
1200 Sixth Avenue
Seattle, Washington 98101

Attn: Nancy Helm, Manager

RE: Submittal of 40 CFR Part 61 (NESHAP), Subpart A, §61.07 Application for Approval of Construction or Modification (Nu-West Industries Inc. Conda Phosphate Operations - Soda Springs, Idaho)

Dear Ms. Helm,

Pursuant to 40 CFR Part 61, Subpart A, §61.07, enclosed please find Nu-West Industries Inc. Conda Phosphate Operations' (Nu-West CPO) application for the proposed lateral expansion of its phosphogypsum stack system.

As set out in more detail in the enclosed application and in the proposed project's current Permit to Construct (P-2009.0002), issued by IDEQ on February 20, 2009 (a copy of which is attached to the application as Exhibit A), Nu-West CPO is proposing to expand its existing phosphogypsum stack system by constructing a new 125-acre gyp stack cell (i.e., F-GYP-2) in the northwest corner of the facility. Note that construction of the new gyp stack cell is expected to commence on April 1, 2010.

Should you have any questions about the information contained in the application, please do not hesitate to contact me or Mr. Michael Bauerle (Nu-West CPO's Environmental Supervisor) at (208) 547-4381, ext. 215.

Respectfully submitted,

Erik Vettergren
Nu-West CPO Plant Manager

Enclosure

cc: Rick Elkins (IDEQ)

APPLICATION FOR APPROVAL OF CONSTRUCTION OR MODIFICATION

Applicable Rule: 40 CFR Part 61 (NESHAP) Subpart A, §61.07

I. APPLICANT'S NAME AND ADDRESS

Name: Nu-West Industries, Inc. Conda Phosphate Operations (Nu-West CPO)

Mailing Address: 3010 Conda Road
Soda Springs, ID 83276

II. SOURCE LOCATION

7 miles north of Soda Springs, Idaho, 1.2 miles east of Highway 34

III. TECHNICAL DESCRIPTION OF THE SOURCE

1. Nature of Source / Changes

Nu-West CPO is proposing to laterally expand its existing phosphogypsum (gyp) stack system by constructing a new 125-acre gyp stack cell in the northwest corner of the facility. The new gyp stack cell is called West Gyp Stack II (F-GYP-2).

As defined in 40 CFR 61 Subpart R (National Emission Standards for Radon Emissions from Phosphogypsum Stacks), §61.201(c), gyp stacks are piles of waste resulting from wet acid phosphorus production, including phosphate mines or other sites that are used for the disposal of phosphogypsum. Pursuant to the proposed project's Permit to Construct (PTC) issued by the Idaho Department of Environmental Quality (P-2009.002), the gyp stack system at Nu-West CPO consists of F-GYP-0 (existing 125-acre stack encompassing #1 gyp, #2/3 gyp and #3 tailings pond), F-GYP-1 (existing nominal 125-acre stack) and F-GYP-2 (proposed nominal 125-acre gyp stack).

The proposed expansion of Nu-West CPO's gyp stack system will include moving phosphogypsum internally within the expanded gyp stack system. As described in more detail below, phosphogypsum will be moved from the existing F-GYP-0 stack to be used as building material for starter dikes and HDPE liner cover for the new F-GYP-2 phosphogypsum stack project. Because the new gyp stack cell will be part of an expanded but existing integrated gyp stack system, the contemplated use of the gyp moved from F-GYP-0 to the new stack will continue to be managed identically to current practice in accordance with the applicable requirements set forth in 40 CFR Part 61 Subpart R.

2. Size

Phosphogypsum stack F-GYP-2 will be a nominal 125-acre settling pond cell with an overall footprint of about 140 acres.

3. Modification Project Design

Like the existing gyp stack system cells, F-GYP-2 will be designed with features that prevent release of gyp to the environment, including engineered dikes and a liner system. The new stack (F-GYP-2) will be underlain by a composite liner consisting of at least two feet of compacted phosphogypsum, a 60 mil HDPE membrane, and compacted clay. Liner construction begins with placement of the compacted clay and HDPE, followed by construction of dikes around the perimeter and across the center of the new cell and two feet of compacted dry phosphogypsum mechanically placed above the HDPE liner. Phosphogypsum starter dikes and phosphogypsum cover over the HDPE liner will require a total of approximately 675,000 compacted cubic yards of phosphogypsum.

Notably, the proposed use of any gyp moved from the existing gyp stack cells will be exclusively for construction of the new stack liner and starter dike, entailing no processing or off-site movement of gyp.

The new cell will initially include a center dike to effectively split the 125-acre cell into two equal cells for purposes of facilitating the final phase of gyp stack liner construction. The first liner construction cell will be filled with process water to an elevation that will allow water to be decanted from the cell to the cooling pond through the decant ditch system. The filling process then will switch to gyp slurry and the water will gradually be displaced with phosphogypsum. Once this first cell is filled with gyp slurry and the water displaced, the second liner construction cell will be filled with water and the process repeated until the entire 125 acre cell has received a sufficient quantity of wetted phosphogypsum to displace all of the process water and complete liner construction.

Normal operation of the combined gyp stack system, including F-GYP-0, F-GYP-1 and F-GYP-2, will be conducted per the requirements of the PTC, attached as Exhibit A (including stack commissioning and inspection plan referenced in the PTC).

4. Source Operation and Emissions

4.1. General Description

Phosphogypsum, a by-product of the phosphoric acid production process, will continue to be slurried to the gyp stack system consistent with current practice. The slurry is approximately 20% solids. At the gyp stack cell (settling pond), solids in the slurry are allowed to settle and the water is decanted to an evaporative cooling pond. The process water is recycled to the processing plant.

The settled phosphogypsum is allowed to dry to a moisture content of about 40% by directing the slurry to a rotation of cells on the stack system. When a cell has dried appropriately, the cell is excavated using a backhoe or similar equipment to build up the exterior dikes of the stack. When the interior of the cell is excavated and dikes are elevated to the necessary height, the cell is flooded with slurry again and the process is repeated, gradually raising the height of the stack over time.

4.2. Productive Capacity

The affected source subject to the NESHAP is the phosphogypsum stack which does not have a productive capacity. Production at the phosphoric acid plant, which sends the phosphogypsum slurry to the gyp stack cells or settling ponds, is not affected as a result of this proposed project. The equivalent P2O5 feed to the phosphoric acid plant shall not exceed 560,000 tons per any consecutive 12-month period. *See* PTC (Exhibit A), Condition 2.9.

4.3. Radon Flux Estimates and Control

Pursuant to 40 CFR Part 61, Subpart R, §§ 61.202 and 61.203, each person who generates phosphogypsum shall place all phosphogypsum in stacks. Phosphogypsum may be removed from a phosphogypsum stack system only as expressly provided by 40 CFR 61, Subpart R. If the gyp stack becomes classified as inactive, the stack is then subject to the radon-222 flux testing and emissions limits (20 pCi/(m²-sec)), and related requirements in 40 CFR 61 Subpart R. "Inactive" stack means a stack to which no further routine additions of phosphogypsum will be made and which is no longer used for water management associated with the production of phosphogypsum. If a stack has not been used for either purpose for two years, it is presumed to be inactive. Because all stacks/cells contained in Nu-West CPO's gyp stack system are active, the Subpart R flux testing and emission control standards currently are not applicable and, as such, there is no data to calculate a precise estimate of the pre- and post- project radon-222 emissions.

Additionally, while Nu-West CPO does not expect an increase in radon-226 in the actual gyp material, due to the increased surface area of the overall gyp stack system that will result from the construction of a new gyp stack, it is anticipated that the proposed project could potentially result in a net increase in potential radon-222 (a decay product of radon-226) flux from the combined gyp stack system.

Nu-West CPO plans to operate the combined gyp stack system consistent with Subpart R NESHAP standards, including radon flux testing and appropriate controls upon any stack becoming inactive, in accordance with PTC Condition 2.6.

As described in section 4.2 above, Nu-West CPO's proposed gyp stack system expansion project will not affect the productive capacity of the phosphoric acid production plant and, therefore, consistent with the existing production limit retained in the PTC, the project will not result in an increase in volume of gyp managed in the integrated gyp stack system. Finally, it should be noted that, although Nu-West CPO believes 40 CFR § 61.07 is inapplicable because any phosphogypsum moved as part of this project will remain on-site within the gyp stack system, the proposed use of any gyp moved within the stack system will inherently meet the standard set forth at § 61.206(c) since it will be managed in a phosphogypsum stack.

5. Conclusion

Therefore, for the reasons described above, Nu-West CPO respectfully requests approval of the F-GYP-2 gyp stack system expansion project pursuant to 40 CFR Part 61, Subpart A, §61.07, and consistent with PTC for this project.

EXHIBIT A

Air Quality
PERMIT TO CONSTRUCT
State of Idaho
Department of Environmental Quality

PERMIT No.: P-2009.0002
FACILITY ID No.: 029-00003
AQCR: 61 **CLASS:** A **ZONE:** 12
SIC: 2874 **NAICS:** 325312
UTM COORDINATE (km): 455.8, 4731.8

1. **PERMITTEE**
Nu-West Industries, Inc.; Agrium Conda Phosphate Operations

2. **PROJECT**
Phosphogypsum Stacks, revision for construction of the West Gypsum Stack II (F-GYP-2)

3. MAILING ADDRESS	CITY	STATE	ZIP
3010 Conda Road	Soda Springs	ID	83276
4. FACILITY CONTACT	**TITLE**	**TELEPHONE**	
Coleman Kavanagh	Environmental Supervisor	(208) 547-4381 ext 263	
5. RESPONSIBLE OFFICIAL	**TITLE**	**TELEPHONE**	
Erik Vettergren	Plant Manager	(208) 547-4381	
6. EXACT PLANT LOCATION		**COUNTY**	
7 miles north of Soda Springs, 1.2 miles east of Highway 34		Caribou	

7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**
Phosphate-based fertilizer products

8. **PERMIT AUTHORITY**

This permit is issued according to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.200 through 228, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented with its application. Changes in design, equipment or operations may be considered a modification. Modifications are subject to DEQ review in accordance with IDAPA 58.01.01.200 through 228 of the Rules for the Control of Air Pollution in Idaho.

KEN HANNA, PERMIT WRITER
DEPARTMENT OF ENVIRONMENTAL QUALITY

MIKE SIMON, STATIONARY SOURCE PROGRAM MANAGER
DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE MODIFIED/REVISED:	February 20, 2009
DATE ISSUED:	July 22, 2005

Table of Contents

Acronyms, Units, and Chemical Nomenclature

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CAA	Clean Air Act
CFR	Code of Federal Regulations
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
gyp	gypsum or phosphogypsum
HAP	hazardous air pollutant
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pounds per hour
m	meter(s)
MACT	Maximum Achievable Control Technology
NAICS	North American Industry Classification System
NESHAP	Nation Emission Standards for Hazardous Air Pollutants
NSPS	New Source Performance Standards
pCi	picocurie
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PTC	permit to construct
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
TAP	toxic air pollutant
T/yr	tons per year
UTM	Universal Transverse Mercator

1. PERMIT TO CONSTRUCT SCOPE

Purpose

1.1 The purpose of this PTC revision is to revise the requirements for construction of the West Gypsum Stack II (F-GYP-2). This revised permit clarifies the pond surface size requirements, emissions limits, and the monitoring requirements for the facility's phosphogypsum (gyp) stacks.

1.2 Those permit conditions that have been modified or revised by this permitting action are identified by a date citation located directly under the permit condition and on the right hand margin.

1.3 This PTC replaces PTC No. P-2007.0170, issued on December 19, 2007, for construction of the West Gypsum Stack II (F-GYP-2), the terms and conditions of which shall no longer apply.

Regulated Sources

1.4 Table 1.1 lists all sources of regulated emissions in this PTC.

Table 1.1 SUMMARY OF REGULATED SOURCES

Permit Section	Source Description	Emissions Control
2	125-acre Gyp Stack, F-GYP-0, built prior to 1967 The gyp stack is a phosphogypsum settling pond	Reasonable control of fugitive emissions
2	125-acre West Gyp Stack I, F-GYP-1 The gyp stack is a phosphogypsum settling pond	Reasonable control of fugitive emissions
2	125-acre West Gyp Stack II, F-GYP-2 The gyp stack is a phosphogypsum settling pond	Reasonable control of fugitive emissions

2. GYP STACKS

2.1 Process Description

Phosphogypsum, a by-product of the phosphoric acid production process, is slurried to a pile referred to as a "gyp stack." The slurry is approximately 20% solids. At the gyp stack, solids in the slurry are allowed to settle and the water is decanted to an evaporative cooling pond. The process water is recycled to the processing plant.

The settled phosphogypsum is allowed to dry to a moisture content of about 40% by directing the slurry to a rotation of cells on the stack. When a cell has dried appropriately, the cell is excavated using a backhoe to build up the exterior dikes of the stack. When the interior of the cell is excavated and dikes are elevated to the necessary height, the cell is flooded with slurry again.

2.2 Emissions Control Description

Table 2.1 DESCRIPTION FOR WEST GYP STACKS

Emissions Units / Processes	Emissions Control Device	Emissions Point
125-acre Gyp Stack, F-GYP-0	Reasonable control of fugitive emissions	Fugitive from gyp stack
125-acre West Gyp Stack I, F-GYP-1	Reasonable control of fugitive emissions	Fugitive from gyp stack
125-acre West Gyp Stack II, F-GYP-2	Reasonable control of fugitive emissions	Fugitive from gyp stack

Emissions Limits

2.3 Gyp Stack Emissions Limits

2.3.1 Upon completion of construction of F-GYP-2, the combined emissions of fluoride (F) from the three 125-acre gypsum stacks (F-GYP-0, F-GYP-1, and F-GYP-2) shall not exceed 200 pounds per day and 14.6 tons per any consecutive rolling 12-month period.

2.3.2 Prior to completion of construction of F-GYP-2, the combined emissions of fluoride (F) from the two 125-acre gypsum stacks (F-GYP-0 and F-GYP-1) shall not exceed 200 pounds per day and 36.5 tons per any consecutive rolling 12-month period. After construction of F-GYP-2 is completed, Permit Condition 2.3.2 no longer applies.

2.3.3 For purposes of compliance with Permit Conditions 2.3, 2.7, and 2.10, construction of the new gypsum stack (F-GYP-2) shall include placement of at least two feet of compacted phosphogypsum atop the 60 mil HDPE composite liner membrane and compacted clay to ensure adequate liner integrity. At that point, process water will be introduced and when fully displaced by gypsum slurry in both cells, the construction process shall be deemed complete.

[02/20/09]

2.4 Phosphoric Acid Plant Emissions Limit

The fluoride emissions from the phosphoric acid plant shall not exceed 3.8 tons per any consecutive 12-month period.

[12/19/07]

2.5 Reasonable Control of Fugitive Dust

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

2.6 Radon Emissions from Phosphogypsum Stacks

Each person who generates phosphogypsum shall place all phosphogypsum in stacks. Phosphogypsum may be removed from a phosphogypsum stack only as expressly provided by 40 CFR 61, Subpart R, National Emission Standards for Radon Emissions from Phosphogypsum Stacks. If the gypsum stack becomes classified as inactive, the stack is then subject to the radon-222 emissions limits (1.9 pCi/(ft^2-sec)) and related requirements in 40 CFR 61 Subpart R. *Inactive stack* means a stack to which no further routine additions of phosphogypsum will be made and which is no longer used for water management associated with the production of phosphogypsum. If a stack has not been used for either purpose for two years, it is presumed to be inactive.

Operating Requirements

2.7 Gyp Stack Area Limits

2.7.1 Upon completion of construction of F-GYP-2, the combined visible liquid layer surface area of the ponds within the three 125-acre gyp stacks (F-GYP-0, F-GYP-1, and F-GYP-2) shall not exceed 50 acres on a 12-month rolling average basis.

2.7.2 Prior to completion of construction of F-GYP-2, the combined visible liquid layer surface area of the ponds within the two 125-acre gyp stacks (F-GYP-0 and F-GYP-1) shall not exceed 125 acres. After construction of F-GYP-2 is completed, Permit Condition 2.7.2 no longer applies.

[02/20/09]

2.8 Distribution and Use of Phosphogypsum

Phosphogypsum may be lawfully removed from a stack and distributed for use in outdoor agricultural research and development, agricultural field use, indoor research and development activities, or for other purposes, only in accordance with the requirements of 40 CFR 61 Subpart R.

2.9 Phosphoric Acid Plant P_2O_5 Throughput Limit

The equivalent P_2O_5 feed to the phosphoric acid plant shall not exceed 560,000 tons per any consecutive 12-month period.

Monitoring and Recordkeeping Requirements

2.10 Gyp Stack Area Monitoring

2.10.1 Upon completion of construction of F-GYP-2, on a twice-monthly basis (the first and third full calendar week of each month), Nu-West shall measure and record, in acres, the combined visible liquid layer surface area of each of the ponds within the three 125-acre gyp stacks. Monitoring and recordkeeping procedures for performing this measurement shall be included in a Water Management and Monitoring Plan. For purposes of demonstrating compliance using the approved Water Management and Monitoring Plan, the term "visible liquid layer area," as used in Permit Condition 2.7, shall mean that observable surface area that is covered with a visible layer of liquid (standing or flowing) within the Gyp Stack system ponds. The Water Management and Monitoring Plan is incorporated by reference into this permit and shall be maintained on-site and made available to DEQ representatives upon request.

Compliance with the 50-acre limit in Permit Condition 2.7 shall be based on a rolling 12-month average of the twice-monthly observations.

Compliance with the daily emission limit in Permit Condition 2.3 shall be demonstrated based on each of the individual observations. Monitoring records that are generated to demonstrate compliance with the daily limit shall also be maintained in accordance with General Provision 7.

2.10.2 Prior to completion of construction of F-GYP-2, once per year the permittee shall measure and record, in acres, the combined visible liquid layer surface area of each of the ponds within the two 125-acre gyp stacks (F-GYP-0 and F-GYP-1). After construction of F-GYP-2 is completed, Permit Condition 2.10.2 no longer applies.

2.10.3 Within 60 days of issuance of the permit, the permittee shall submit a copy of the Water Management and Monitoring Plan (Plan) to DEQ at the address listed in Table 2.2 of this permit. If the Plan is changed, a copy of the revised Plan shall be sent to DEQ.

[02/20/09]

2.11 NSR Projected Emissions Records for the Gypsum Stack Project; 52.21(r)(6)

The permittee shall maintain records and provide reports as follows for the project to construct a new gypsum stack in accordance with IDAPA 58.01.01.205.01 [40 CFR 52.21(r)(6) and (7)]:

2.11.1 In accordance with 40 CFR 52.21(r)(6)(i), before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:

(a) A description of the project;

(b) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project (i.e., gypsum stacks); and

(c) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under 40 CFR 52.21(b)(41)(ii)(c) and an explanation for why such amount was excluded, and any netting calculations, if applicable.

2.11.2 In accordance with 40 CFR 52.21(r)(6)(iii), the owner or operator shall monitor the emissions of fluoride from the emissions units listed in Permit Condition 2.11.1; and calculate and maintain a record of the

annual emissions, in tons per year on a calendar year basis, for a period of 10 years following resumption of regular operations after the change.

2.11.3 In accordance with 40 CFR 52.21(r)(6)(v), the owner or operator shall submit a report to DEQ and the EPA Administrator if the annual emissions, in tons per year, from the project identified under Permit Condition 2.11.1, exceed the baseline actual emissions (as documented and maintained pursuant to Permit Condition 2.11.1(c)), by a significant amount (as defined in 40 CFR 52.21(b)(23)) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to Permit Condition 2.11.1(c). Such report shall be submitted to DEQ and the EPA Administrator within 60 days after the end of such year. The report shall contain the following:

(a) The name, address and telephone number of the major stationary source;

(b) The annual emissions as calculated pursuant to 40 CFR 52.21(r)(6)(iii); and

(c) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

2.11.4 In accordance with 40 CFR 52.21(r)(7), the owner or operator of the source shall make the information required to be documented and maintained pursuant to 40 CFR 52.21(r)(6) available for review upon a request for inspection by the Administrator or the general public pursuant to the requirements contained in 40 CFR 70.4(b)(3)(viii).

2.11.5 Written procedures to demonstrate compliance with Permit Condition 2.11 shall be included in the Water Management and Monitoring Plan, including the required records maintenance activities.

[02/20/09]

2.12 **Radon Monitoring and Compliance Procedures**

Within 60 days following the date on which a stack becomes an inactive stack, each owner or operator of an inactive phosphogypsum stack shall test the stack for radon-222 flux in accordance with the procedures described in 40 CFR part 61, Appendix B, Method 115. DEQ and EPA shall be notified at least 30 days prior to each such emissions test so that DEQ or the EPA may, at its option, observe the test. The test report shall be submitted according to the requirements in 40 CFR 61.203.

2.13 **Phosphoric Acid Plant Feed**

Each month, the permittee shall monitor and record the equivalent P_2O_5 feed to the phosphoric acid plant for the previous month and for the previous consecutive 12-month period. Monitoring of P_2O_5 feed shall be conducted in accordance with 40 CFR 63.605.

[12/19/07]

NESHAP 40 CFR 61 Subpart A – General Provisions

2.14 Generally applicable reporting, record keeping, and notification requirements of Subpart A of the National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR 61) are included in Table 2.2. These summaries are provided to highlight the notification and record keeping requirements of 40 CFR 61 for affected facilities, and are not intended to be a comprehensive listing of all general provision requirements that may apply nor do the summaries relieve the permittee from the responsibility to comply with all applicable requirements of the CFR. Should there be a conflict between these

summaries and the NESHAP, the NESHAP shall govern. The permittee is encouraged to read all of 40 CFR 61 Subpart A. The CFRs are available online at: http://www.gpoaccess.gov/cfr/index.html .

Table 2.2 NESHAP SUBPART A (40 CFR 61) SUMMARY OF GENERAL PROVISIONS FOR AFFECTED FACILITIES

Section	Section Title	Summary of Section
61.04	Address	All requests, reports, applications, and other communications shall be submitted to: Director Air and Waste Office EPA Region 10 Operating Permits, OAQ-107 1200 Sixth Avenue Seattle, WA 98101 Air Quality Permit Compliance Department of Environmental Quality Air Pocatello Regional Office 444 Hospital Way, #300 Pocatello, ID 83201
61.05	Prohibited Activities	No owner or operator shall construct or modify any stationary source subject to a standard without first obtaining written approval in accordance with 40 CFR 61.08
61.07	Application for approval of construction/ modification	Submit application for approval of construction of any new source or modification of an existing source before the construction or modification is planned to commence.
61.09	Notification of startup	Notification of anticipated date of initial startup of the source not more than 60 days nor less than 30 days before that date; and notification of the actual date of initial startup of the source within 15 days after that date.
61.10	Source reporting	All facilities designated under Subpart R are exempt from the reporting requirements of 40 CFR 61.10 in accordance with 40 CFR 61.210.
61.12(c) and (e)	Compliance with standards and maintenance requirements	The owner or operator of each stationary source shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.
61.13	Emission tests	When emission testing is required under Subpart R, the requirements under 40 CFR 61.13 shall be complied with also.
61.14	Monitoring Requirements	For any monitoring required under Subpart R, the requirements under 40 CFR 61.14 shall be complied with also
61.19	Circumvention	No owner or operator shall build, erect, install or use any article or method, including dilution, to conceal an emission which would otherwise constitute a violation.

[02/20/09]

3. PERMIT TO CONSTRUCT GENERAL PROVISIONS

General Compliance

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the Rules for the Control of Air Pollution in Idaho. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the Rules for the Control of Air Pollution in Idaho, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq.

[Idaho Code §39-101, et seq.]

2. The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/94]

3. Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

Inspection and Entry

4. Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:
   a. Enter upon the permittee's premises where an emissions source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
   b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
   d. As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

Construction and Operation Notification

5. The permittee shall furnish DEQ written notifications as follows in accordance with IDAPA 58.01.01.211:
   a. A notification of the date of initiation of construction, within five working days after occurrence;
   b. A notification of the date of any suspension of construction, if such suspension lasts for one year or more;

c. A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date;

d. A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date; and

e. A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211, 5/1/94]

Performance Testing

6. If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

   All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

   Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00]

Monitoring and Recordkeeping

7. The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Records of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/94]

Excess Emissions

8. The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

[IDAPA 58.01.01.130-136, 4/5/00]

Certification

9. All documents submitted to DEQ, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

False Statements

10. No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

Tampering

11. No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Transferability

12. This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

Severability

13. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]

Agrium

NU-WEST CPO GYPSUM STACK COMMISSIONING AND INSPECTION PLAN

1. BACKGROUND INFORMATION

1.1 Introduction

The gypsum storage system at Nu-West Conda Phosphate Operations (CPO) consists of the Phase I and Phase II stacks, and the old gypsum stack system, including the following processes and types of storage structures.

1.2 Phase I and II Gypsum Stack Operation

CPO will be operating the Phase I part of the gypsum stack system as of January 2006 and Phase II starting in 2010. These new cells will be used to store gypsum (phosphogypsum) slurry that is pumped from the fertilizer plant, located southeast of the existing stack system. The Phase I and II cells will be approximately 2400 feet on each side and each will have a starting interior area of approximately 125 acres.

As a part of the construction of the new stack, the new cells are underlain by a composite liner consisting of compacted gypsum, a 60 mil HDPE (high density polyethylene) membrane and compacted clay, to provide groundwater protection. The cells are also constructed with 2 internal underdrains, just above the HDPE liner, to help lower the phreatic line (water level) in perimeter areas of the stack. These drains will flow to the perimeter ditch around the stack. Gypsum will be pumped via a 16 inch HDPE pipe line, as a slurry, from the plant at a nominal rate of 3500 to 4000 gallons per minute (gpm) and a solids content of 20 to 30%.

The new stacks will be raised using upstream "rim ditch" construction methods. The gypsum will be discharged into the cell and allowed to settle. The discharge point will be moved as the gypsum builds up at the end of the discharge pipe. Once the gypsum has settled and dewatered, it will be excavated from the edge of the stack by a hydraulic backhoe and placed on the perimeter of the stack. The excavated gypsum will then be spread and compacted to form and raise the outside slope of the stack. Each cell will be operated as an individual cell, but after the completion of construction of the new stack the entire stack system will be allowed to have no more than 50 acres of a visible liquid layer on a rolling 12-month basis as detailed in the CPO Gypsum Stack Water Management and Monitoring Plan.

The slopes of the stack will be built at an angle of 2H to 1 V with two intermediate horizontal benches. The mid-height bench will be fitted with a perimeter slope drain to help lower the phreatic surface in the stack. The stack will have a final slope angle of 2.3H to 1V and is anticipated to have a total height of approximately 175 feet (top elevation of about 6330 feet). The acidic process water that is temporarily stored on top

of the stack will be returned to the existing cooling ponds, 1 mile to the south, via an HDPE lined return water ditch that is located at the base of the existing stack system.

1.3 Old Gypsum Stacks

The old gypsum stack system consists of #1 gyp, #2/3 gyp and #3 tailings pond. The old gyp stacks will be used for part of the year through 2009 and then will be used for emergency gypsum storage and water management. Adequate storage space will be provided for approximately 600 acre-feet of storage. The gypsum slurry can be routed to the old stacks through the new East gyp transport line using either the East or West gyp pump at the same nominal rate and solid content.

When operating into the old gypsum stack, conventional construction techniques are used to raise the dikes. This method employs the use of earth-moving equipment such as scrapers, bulldozers, blades, compactors and hydraulic excavators. The gypsum is excavated from a borrow site and allowed proper time to dry. Once dried, the gypsum is hauled via the equipment and placed on the crest of the existing gypsum dike, which has been properly scarified and prepared. The gypsum is then spread, shaped, and compacted across the dike forming the new lift. Each lift will range from 12-18 inches when using the conventional construction method.

The decant procedures used when operating into the old stack consist of either the decant pipe method or the open trench method. With the decant pipe method, a cut is made in the existing gypsum dike and an HDPE pipe is placed in the bottom. The cut is then backfilled and the gypsum is allowed time to "set-up" before activating the decant pipe. Once the new pipe is activated, it is inspected regularly to ensure that no leakage exists. With the open cut method, a cut is made in the gypsum dike and the water is allowed to flow through the trench and over the gypsum dike in a controlled manner. For both methods, the decanted water then flows into the decant ditch located at the base of the stack on the west side. The water then flows to the cooling ponds where it is mixed with hot process water and allowed to cool before being pumped back to the plant.

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2. COMMISSIONING PLAN FOR PHASE II STACK

2.1 General Construction Methodology

The Phase II gypsum stack will be commissioned after the completion of construction, projected to occur in mid 2010. The new stack will be underlain by a composite liner consisting of at least two feet of compacted gypsum, a 60 mil HDPE membrane, and compacted clay. Liner construction begins with placement of the compacted clay and HDPE, followed by construction of dikes around the perimeter and across the center of the new stack and two feet of compacted gypsum mechanically placed above the HDPE liner.

The new cell will include a center dike to effectively split the 125 acre cell into two equal ponds for purposes of facilitating the final phase of liner construction. The first cell will be filled with process water to an elevation that will allow water to be decanted from the cell to the cooling pond through the decant ditch system. The filling process then will switch to gypsum slurry and the water will gradually be displaced with gypsum. Once this first cell is filled with gypsum and the water displaced, the second cell will be filled with water and the process repeated until the entire 125 acre cell has received a sufficient quantity of compacted gypsum as the final layer of the composite liner. This liner construction process is described below in greater detail.

2.2 Initial Water Fill

After completion of compacted clay and HDPE layer placement and initial dike construction, one of the cells will be filled with water from the process and production wells to an elevation that will allow decanting through a pipe buried in the dikes. Process water will be transported to the Phase II cell through the spare gypsum HDPE pipe line.

2.3 Gypsum Slurry to Phase II

Once the first cell is filled with adequate water that a decant can be started, the gypsum slurry will be switched to this cell and the water will begin to be displaced to the decant ditch and cooling pond. The plant will continue to operate the existing gyp stack system (i.e., old stack and Phase I cells) with a limit of 125 acres while the new stack is under construction. Because the plant is likely to be operating in the Phase I stacks during Phase II construction, the visible liquid layer area in the overall gyp stack system should be 125 acres or less in the Phase I stack and up to 125 acres in Phase II. Once the gypsum slurry is switched to the first half of Phase II and Phase I is drained, the overall acreage will immediately begin to be reduced until the first cell has the water displaced.

As the visible liquid layer area of the Phase II stack's first liner construction cell is being reduced after sufficient gypsum placement on the HDPE membrane, the second Phase II stack liner construction cell will begin filling with water. When process water is fully displaced from the first cell, the slurry pipe line will be switched to the second cell to begin placement of the final gypsum layer on the HDPE membrane of the other half of the Phase II stack. During the process of constructing the Phase II stack liner's compacted gypsum layer, the water and slurry will be managed such that the visible liquid layer on the Phase II stack should not significantly exceed 112.5 acres during the construction period.

2.4 Phase II Stack Commissioning Duration

The Phase II stack commissioning will occur after completion of stack liner construction, which is defined as placement of a minimum of two feet of compacted gypsum atop the liner's HDPE membrane and related dewatering. As one of the last components of the construction of the Phase II stack, the new stack will be dewatered to a point where no more than 50 acres of the stack is covered with a visible liquid layer on a 12-month rolling average basis. Utilizing a center dike to facilitate water/slurry management during liner construction, it is estimated that Phase II stack liner construction should be accomplished within approximately 6 months after placement of the HDPE membrane and initial dike construction.

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3. INSPECTION REQUIREMENTS

3.1 General

To ensure safe and proper operation of the combined gypsum stack system, the system shall be inspected for integrity and water management as described in this Section 3 (Inspection Requirements).

3.2 Training

All personnel must receive training prior to engaging in gypsum stack system inspection or operation activities. All inspectors shall undergo annual training in accordance with the Agrium CPO training program. Records documenting training of inspectors and operators shall be maintained for a period of 3 years.

3.3 Inspection Frequency and Inspectors

Employees of Agrium CPO who have received annual training by an engineer experienced in dike design, construction, operation, and inspection will perform inspections. Inspection records will be kept on file for a minimum of 3 years. The inspector will use the designated Gyp truck to traverse the terrain involved at a slow speed, and on foot as needed. The findings of each inspection will be recorded, signed by the inspector, and filed after supervisory personnel initiate any necessary corrective action. The inspection program includes the following type of inspections and inspectors:

- Daily Inspections will be performed by the field operator 2 to 3 times per shift and will include inspection of the pond system, condition of dikes, water level elevations and freeboard, and existing critical conditions, if any, until corrective maintenance is completed.
- Weekly Inspections will be performed by the Ponds Supervisor and/or his designee and will include inspection of perimeter earthen dike conditions, water level control structures (e.g. spillways, pumps, and pipe lines), and potential trouble areas.
- Annual Inspections to be performed by a Third Party Engineer.
- Excavation & Backfilling Inspections of Decant Cuts to be performed, as applicable, by qualified company employee.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

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AIR, WASTE AND TOXICS
J. A. CAGLE

JAN 25 2010

Mr. Erik Vettergren, Plant Manager
Nu-West Industries, Inc.
Conda Phosphate Operatrions
3010 Conda Road
Soda Springs, Idaho 83276

Re: Nu-West Industries, Inc. Conda Phosphate Operations Phophogypsum Stack System Expansion

Dear Mr. Vettergren:

This is in response to your letter on August 27, 2009, in which you requested the U.S. Environmental Protection Agency (EPA) review and approve the phospogypsum (gyp) stack system expansion project at the Nu-West Industries, Inc. Conda Phosphate Operations (Nu-West CPO) Plant located in Soda Springs, Idaho. In the request, Nu-West CPO proposed to laterally expand its existing gyp stack system by constructing a new 125-acre gyp stack cell, called West Gyp Stack II (F-GYP-2), in the northwest corner of the facility. The construction is expected to commence on April 1, 2010. Based on the discussion below, EPA approves your request for gyp stack system expansion.

Background

According to Nu-West CPO, the existing gyp stack system located in Soda Springs, Idaho consists of the following:

- F-GYP-0, an existing 125-acre stack encompassing #1 gyp, #2/3 gyp and #3 tailings ponds, and
- F-GYP-1, a nominal 125-acre settling pond cell.

The proposed F-GYP-2 is a nominal 125-acre gyp stack similar to F-GYP-1 designed to prevent release of gyp to the environment, featuring engineered dikes and a liner system. F-GYP-2 will be underlain by a composite liner consisting of at least two feet of compacted gyp, a 60 mil HDPE membrane, and compacted clay. Liner construction begins with placement of the compacted clay and HDPE, followed by construction of dikes around the perimeter and across the center of the new cell and two feet of compacted gyp mechanically placed above the HDPE liner. The liner construction will require 675,000 compacted cubic yards of gyp, all of which will be moved from existing gyp stack cells. No processing or off-site movement of gyp will be required.

Nu-West CPO will start gradually filling gyp slurry into the water filled stack after the construction. The increased surface area of the overall gyp stack system resulting from the proposed system expansion project could potentially result in a net increase in potential radon-222 flux from the combined gyp stack systems. Nu-West CPO plans to operate the combined gyp stack system consistent with 40 CFR 61 Subpart R standards.

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Determination

EPA has reviewed your request and made the following determinations regarding the gyp stack expansion project:

1. **40 CFR 61 Subpart R**

   Pursuant to 40 CFR 61.206(a), phosphogypsum may not be lawfully removed from a stack and distributed or used for any purposes other than for outdoor agricultural pursposes and indoor research and developments without prior EPA approval. Nu-West CPO will remove and use gyp from existing stacks within the facility for the liner construction of F-GYP-2. No processing or off-site movement of gyp will be required. This project is not subject to 61.206(a) because the gyp used came from within the same facility and will become part of and be managed as a new active stack.

   Inactive stack, as defined in 40 CFR 61.201(a), is a stack to which no further routine additions of gyp will be made and which is no longer used for water management associated with the production of gyp. Section 61.202 requires owner or operator of an inactive stack to assure that the stack does not emit more than 20 pCi/(m^2-sec) of radon-222 into the air. As discussed in the previous section, Nu-West CPO will start gradually filling gyp slurry into the water filled F-GYP-2 stack after the construction. Accordingly, F-GYP-2 will be an active stack and will not be subject to 40 CFR 61.202 after expansion.

2. **40 CFR 61 Subpart A**

   According to 40 CFR 61.07(a), the owner or operator shall submit to the Administrator an application for approval of the construction of any new source or modification of any existing source. Although construction only requires gyp to be moved within the Nu-West CPO facility, nonetheless, F-GYP-2 is a new emission source thus requiring an approval from the EPA.

Please note that this approval applies only to the construction of F-GYP-2 for Nu-West CPO's gyp stack system expansion and is only being granted for purpose of 40 CFR 61 Subpart A and Subpart R as specified above and does not relieve Nu-West Industries Inc. of any other requirements or approvals that might apply to the gypstack expansion project. Should any gyp stacks become inactive, Nu-West must operate in compliance with all applicable 40 CFR 61 Subpart R requirements.

If you have any questions regarding this approval, please contact Davis Zhen of my staff at 206-553-7660 or email at Zhen.Davis@epa.gov.

Sincerely,

Nancy Helm, Manager
Federal and Delegated Air Programs Unit

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